OIB - WP-3D Orion 05/09/16 Science Report

Aircraft:
WP-3D Orion (See full schedule)
Date:
Monday, May 9, 2016
Mission:
OIB
Mission Location:
Thule, Greenland
Mission Summary:

Mission: Zachariae-79N (priority: baseline)

This mission reoccupies the centerlines of the Zacharaie and 79N glaciers, plus flies a grid of six ascending IceSat-1 tracks similar to one originally flown by OIB in 2012, but moved upstream by two IceSat-1 groundtracks to account for the breakup of the lower ice shelf. It also overflies a pair of PROMICE sites immediately north of 79N Glacier. We transit to and from the northeast region along a historical ATM lines dating back to 1994, and along an as-yet unflown master grid line.

Today was our first land ice flight of the current season, and our last flight from Thule before departing for Kangerlussuaq tomorrow (though we hope to gather some baseline land ice data along the way). The Zachariae and 79N Glaciers have been covered in persistent fog for the last two weeks, but the fog began breaking up late on Saturday and had cleared completely by this morning. The area had also been persistently clouded in 2015, and this prevented our flying there last year. We also had to launch this morning's flight with the expectation of incoming weather during the afternoon at Thule, which could have forced a divert to Kangerlussuaq. We weighed this schedule risk against the scientific value of this particular flight and concluded that the risk of a divert was worth taking. As it turned out, the weather held off and the divert was not necessary. All of our remaining sea ice targets were almost completely covered in low clouds and fog today (see attached weather satellite image).

All instruments performed normally today. We encountered a networking problem prior to takeoff which, among lesser consequences, prevented the ATM data system from receiving critical timing and positioning information from the ATM/Nav equipment rack. With help from the NOAA crew, we resolved this problem with a workaround prior to takeoff and it did not affect our science mission.

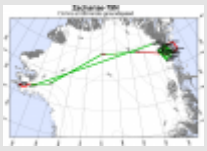
We conducted a ramp pass at 2000' AGL.

Data volumes:
ATM: 30 Gb
FLIR: 3.9 Gb
DMS: 138 Gb
Ku-Band Radar: 218 Gb
MCoRDS: 3.0 Tb
Snow Radar: 218 Gb
BESST: xx Gb

total data collection time: 7.3 hrs

Images:

Map of today's flight



Read more

Weather satellite image from this morning

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Remnant ice shelf of Zachariae Glacier

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Melt pond

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Submitted by:
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